Mid Semester Project Proposal

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Central Question:

Which countries and cities in the world have had the biggest effects in temperature due to global warming and climate change over the last three decades?

Datasets:

1. **Daily Temperature of Major Cities**

   - This dataset contains the daily temperatures of major cities all around the world for the last 20+ years.
   - The column names in this dataset are Region, Country, State, City, Month, Day, Year, and AvgTemperature.
   - Data format of this dataset is a csv file
   - The number of rows in this dataset is 2,906,329

2. **Global Sea Level (1993-2021)**

   - This dataset contains the global sea level of every ocean in the world from the past 3 decades.
   - The column names in this dataset are Year, TotalWeightedObservations, GMSL_noGIA, stdDevGMSL_noGIA, SmoothedGSML_noGIA, GMSL_GIA, stdDevGMSL_GIA, SmoothedGSML_GIA, SmoothedGSML_GIA_Sigremoved.
   - Data format of this dataset is a csv file

- The number of rows in this dataset is 1049

3. Carbon Dioxide Emissions of The World (1990-2018)

- This dataset contains the amount of Carbon Dioxide(CO2) in the air of all the countries in the world over the span of the last three decades.

- The column names in this dataset are Country, Data Source, Sector, Gas, Unit, and all the years between 1990-2018.

- Data format of this is a csv file

- The number of rows in this dataset is 196

Steps two answer my central question:

- Make a function of all of the datasets.
  - dailyTemps() for the Daily Temperatures of Major Cities dataset.
  - seaLevel() for the Temperatures of all Countries dataset
  - carbonDioxide() for the Carbon Dioxide Emissions of the World dataset.

- Go through the datasets in there functions dailyTemps() and find the Countries/Cities that have had the greatest rising temperature changes in the last 3 decades.

- After finding various Countries/Cities that have had the greatest rising temperature I will then look at the other datasets such as Carbon Dioxide Emissions of The World and Global Sea Level to find more evidence on why the temperature in that Country/City is rising.

- To get this evidence I can look at the country's amount of carbon dioxide in the air in the dataset Carbon Dioxide Emissions of The World using the function carbonDioxide() and in the Global Sea Level I will look at how the sea level around these Countries/Citys have rised and how that has affected the temperature on that given Country/City using the function seaLevel().

- I will also make a function to compute a list of the top 10 countries
  - Function is called greatestTemperature()
  - Use this function to get a list of the countries that have been affected most my global warming over the past 3 decades.

(I hope this gives you an idea of what I want to do with my datasets please tell me if my plan is to complex or needs to be changed).

Citations for Data(None had DOI citation):

1. **Daily Temperature of Major Cities:**

   https://www.kaggle.com/datasets/sudalairajkumar/daily-temperature-of-major-cities.

2. **Global Sea Level (1993-2021)**

   https://www.kaggle.com/datasets/kkhandekar/global-sea-level-1993-2021.

3. **Carbon Dioxide Emissions of the World (1990-2018)**

   https://www.kaggle.com/datasets/ankanhore545/carbon-dioxide-emissions-of-the-world.